

WHAT IS CLAIMED IS:

1. An interconnect unit for use in conjunction with a sign display panel, wherein the sign display panel comprises a controller connected to a set of display units by the interconnect unit, the interconnect unit comprising:

a central processing unit;

a set of display unit connection ports, wherein each of the set of display unit connection ports is configured for interfacing with a subset of the set of display units;

a sensor corresponding to each of the set of display unit connection ports for indicating whether the subset of the set of display units is connected to the each display unit connection port; and

memory for storing interconnect software configured for execution by the central processing unit, wherein the software comprises instructions for determining a configuration of the set of display units.

2. The interconnect unit of claim 1 further comprising a controller connection port for interfacing with the controller.

3. The interconnect unit of claim 2 wherein the interconnect software further comprises instructions for sending the configuration of the set of display units to the controller.

4. The interconnect unit of claim 1, wherein the subset of the set of display units is connected to each connection port by a connector.
5. The interconnect unit of claim 4, wherein the sensor comprises at least one pin at each of the set of connection ports for closing a switch when the connector is connected.
6. The interconnect unit of claim 1 wherein the instructions for determining a configuration of the sets of display units comprise instructions for polling the each display unit connection port to determine whether the sensor indicates the subset of the set of display units is connected to the each display unit connection port, wherein the polling results in a first number representative of a quantity of the subsets of the set of display units connected to the interconnect unit.
7. The interconnect unit of claim 6 wherein the instructions for determining a configuration of the set of display units comprise instructions for determining a second number representative of a quantity of the set of display units.
8. The interconnect unit of claim 7, wherein the instructions for determining the second number comprise sending a message comprising an integer greater than the second number, the message being received by each of the set of display units.
9. The interconnect unit of claim 8, wherein each of the set of display units decrement the integer and the message is returned to the interconnect unit after each of the set of display units has decremented the integer

10. The interconnect unit of claim 9, wherein the instructions for determining the second number comprise determining an amount the integer was decremented.

11. The interconnect unit of claim 7, wherein the set of display units is arranged in a matrix of rows and columns and the instructions for determining a configuration comprise instructions for determining a total number of columns and a total number of rows, wherein the total number of rows corresponds to the first number and the total number of columns corresponds to the second number divided by the first number.

12. The interconnect unit of claim 6, wherein the instructions for determining a configuration of the set of display units comprise instructions for determining a set of row amounts, wherein each row amount is representative of a quantity of a corresponding subset of the set of display units.

13. The interconnect unit of claim 12, wherein the instructions for determining each row amount of the set of row amounts comprise sending a message comprising an integer greater than the quantity of the corresponding subset, the message being received by each of the set of display units.

14. The interconnect unit of claim 13, wherein each of the subset of the set of display units decrement the integer and the message is returned to the interconnect unit after each of the subset of the set of display units has decremented the integer

15. The interconnect unit of claim 14, wherein the instructions for determining each row amount of the set of row amounts further comprise determining an amount the integer was decremented.

16. A method for automatically configuring a sign display panel comprising a set of display units arranged in a matrix of a number of rows and a number of columns, the method comprising:

connecting the set of display units to an interconnect unit, wherein each row of the set of display units is connected to a corresponding connection port of the interconnect unit;

detecting each row at the connection port;

determining the number of rows of the set of display units based on the detected rows;

determining a total number of the set of display units; and

dividing the total number of the set of display units by the number of rows to determine the number of columns.

17. The method of claim 16, wherein determining a total number of the set of display units comprises sending a message comprising an integer greater than the total number of display units to be received by each of the set of display units.

18. The method of claim 17, wherein determining a total number of the set of display units further comprises decrementing the integer at each of the set of display units.

19. The method of claim 18, wherein determining a total number of the set of display units further comprises receiving the message after each of the set of display units has decremented the integer.

20. The method of claim 19, wherein determining a total number of the set of display units further comprises determining an amount the integer was decremented.

21. A method for automatically configuring a sign display panel comprising a set of display units arranged in a set of rows, wherein each row comprises a subset of the set of display units, the method comprising:

connecting the set of display units to an interconnect unit, wherein each row of

the set of display units is connected to a corresponding connection port of the interconnect unit;

detecting each row at the connection port; and

determining a total number of the subset of display units for each detected row.

22. The method of claim 21 wherein determining a total number of the subset of display units comprises sending a message comprising an integer greater than the total number of the subset of display units to be received by each of the subset of display units.

23. The method of claim 22 wherein determining a total number of the subset of display units further comprises decrementing the integer at each of the subset of display units.

24. The method of claim 23 wherein determining a total number of the subset of display units further comprises receiving the message after each of the subset of display units has decremented the integer.

25. The method of claim 24 wherein determining a total number of the subset of display units further comprises determining an amount the integer was decremented.

26. A system for automatically configuring a sign display panel comprising a set of display units arranged in a set of rows, wherein each row comprises a subset of the set of display units, the system comprising:

means for connecting each row of the set of display units to an interconnect unit;

means for detecting each row connected to the interconnect unit; and

means for determining a configuration of the set of display units, wherein the configuration comprises a number of rows connected to the interconnect unit and a number of the subset of display units for each row.